

Appl. No. 09/371,402

Amendment dated Dec. 21, 2004

Reply to Office Action of Sep. 16, 2004

Docket No. 6169-226

IBM Docket No. BOC9-2000-0093

**BEST AVAILABLE COPY****REMARKS/ARGUMENTS**

These remarks are made in response to the Office Action of September 16, 2004 (Office Action). This response is filed with a petition for a one-month extension of time and with an appropriate fee.

In the Office Action, the Examiner has rejected claims 1-4 and 7-10 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,812,533 to Cox (Cox) in view of U.S. Patent No. 6,115,040 to Bladow (Bladow). Claims 5-6 and 11-12 have been rejected under 35 U.S.C. § 103(a) over Cox in view of Bladow, in further view of U.S. Patent No. 6,594,355 to Deo (Deo).

Prior to addressing the rejections on the art, a brief review of the Applicants' invention is in order. The present invention provides a Web-based interface for remotely administering an administrative service component. The service component can execute within a service logic execution environment (SLEE) alongside the SLEE components that are being administered. In one embodiment, the invention can provide this functionality without the aid of specific, external administrative applications or hardware.

The claimed invention is particular to the SLEE architecture, which is a specific environment targeted at communications applications. The SLEE environment is a complex, run-time, executable environment based on the SLEE specification that structures application logic of communications applications as a collection of reusable object-orientated components. The SLEE specification further details requirements for composing these components into higher level and more sophisticated services. That is, the SLEE architecture defines a contract between these components and the container that will host these components at run-time. The Applicants' disclose a new component that operates within the container, which is an administrative service component that processes an event and performs administrative functions consistent with the event. The

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administrative service component is a run-time, component that allows real-time remote administration of SLEE activities.

Turning to the rejections on the art, claims 1-4 and 7-10 under 35 U.S.C. § 103(a) as being unpatentable over Cox in view of Bladow and claims 5-6 and 11-12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cox in view of Bladow in further view of Deo. Cox is the principle reference that is cited for the claims of the present invention, with Bladow and Deo being cited to teach small perceived shortcomings with Cox.

Cox discloses a software development environment that can be used to design SLEE components for deployment within a SLEE architecture. Cox also discloses a virtual network in which generic service components (GSC) can reside that provide telephony service functionality. The virtual network can interface with a physical network (that includes the SLEE) using a service engine 805.

As disclosed by Cox, a Service Creation Environment (SCE 160) can include a set of software tools which can be used to create software objects. These software objects can include components deployable within a SLEE or components deployable within a virtual network. The SCE is to include a "user friendly" GUI that is designed for a non-expert use so that a series of building blocks can generate SLEE component code, thereby permitting non-expert users to construct and deploy software objects that provide telephony services.

Cox is fundamentally different from the Applicants' claimed invention. Cox discloses a software development tool to be used at design time to generate components capable of executing within a SLEE or executing within a virtual network linked a physical network including a SLEE. After creation, the software objects (developed by the SCE 160) can be deployed and used. The Applicants teach a run time administrative

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service component that executes within a SLEE that permits live administrative interactions with the SLEE from a remote location.

Referring to independent claims 1 and 7, Applicants claim the steps of:

providing at least one administrative option included in a hypermedia document, said at least one administrative option corresponding to a function to be performed by a service component executing in a service logic execution environment (SLEE);

receiving a user specified administrative option in said hypermedia document;

generating a SLEE compatible event based on said user specified administrative option, said event being of a type which said service component has been registered in said SLEE to receive; and

routing said event to said service component via said SLEE, said service component processing said event and performing an administrative function consistent with said event.

Regarding the providing step, Cox fails to contemplate an administrative service component that executes in a SLEE. This administrative service component executing within a SLEE (item SC 112 of the Applicants' disclosure) is novel. No equivalent component existed for a SLEE architecture previous to the Applicants' invention, as noted in the Applicants' background lines 8-23). The background notes (page 5, lines 17-21) that conventional administrative systems require an administrative system that is separate and distinct from the service components being administered.

Cox teaches such a separate system (the SCE 160 and/or the virtual network) that are both distinct and separate from the components being administered. Further, Cox does not teach an administrative system at all, but instead teaches a software creation

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environment for creating software objects and/or a virtual network for executing software objects having service logic. In contrast, the Applications' claims are for a system where an administrative system is integrated via the administrative service component with the components being administered.

Regarding the generating step, the Examiner has apparently conceded that Cox fails to expressly teach the claimed limitation of an administrative service component executing within the SLEE. The Examiner, however, asserts that such a limitation is implied by Cox at columns 4, lines 29-30, at column 4, 26-35, and column 33, lines 30-56. Applicants disagree.

Cox teaches that generic service components (GSC) operating from within a virtual network (from column 4, lines 1-7) "provide a means for accessing the service independent features to support provision of a service from a service directory, over a virtual network within which the service is available, in responsive to a call instance relevant to the virtual network." The Examiner implies that somehow (not described by Cox) SLEE compatibility must exist so that communications can occur between the virtual network and the SLEE. The Examiner makes a further unsupported leap by stating that registration for reception in the SLEE must exist for this compatibility to exist. This logical leap is simply not true and actually contradicts the teachings of Cox.

One of skill in the art knows that there are a number of ways to ensure compatibility between two separate software entities, one of which is to create an external interface that maps commands from one entity to the other. Such a teaching would translate input from the "virtual network" through an interface component before conveying the input to the SLEE. Similarly, output from the SLEE could be conveyed to the interface components and translated into a form comprehensible by the virtual network. This arrangement would NOT require a registration for reception in the SLEE

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and definitely would not require a new administrative service component (that is novel, not known in the art, and not contemplated by Cox) to be placed within the SLEE.

Not only is a software interface component one possible way to communicate with the virtual network detailed in Cox, but it appears from Cox to be the contemplated mechanism. That is, communication in Cox occurs via table entries (in the SSP) which are mapped to virtual node tables (shown by FIGS. 28-43). The interface components that perform the mapping include (from FIG. 48) a service engine 825 and/or a network interconnect 810 (as well as potentially other components disposed within a physical network 805 and/or virtual network 800). Alternately, the SCE 210 from FIG. 44-47 can be used as an interface component between virtual network 800 and physical network 805. Applicants do not exactly know what interface components are used, because Cox is not perfectly clear in this respect.

Regardless of how the interface works, somehow a component external to the SLEE 2000 (from figure 20) uses a SLEE event gateway 2005 to exchange data with the SLEE 2000. It is clear that the SSP 110 is separate from the SCE 160, and that communications between the two occur via a SCP (150) from FIG. 1. It is also clear from column 2, lines 1-5 that the service control logic used by the SCP 115 executes within a SLEE in the SCP. All interfaces detailed by Cox are interfaces external to the SCP 115, in which the SLEE is supposed to reside (again column 2, lines 1-5).

Other than the Applications' own disclosure, no suggestion of using an administrative service component within the SLEE exists in Cox or any other cited reference. This novel aspect is clearly claimed (especially the generating step) as external user input (the administrative option) is received in Web-format (via a hypermedia document) that generates an internal SLEE event (based upon a previously registered service component of the SLEE). Proceeding to the routing step, the event is internally routed to the service component (from JSLEE 200 to service component 112

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from FIG. 2) so that the service component 112 can process the event and perform an administrative function consistent with the event.

Attempting to imply a non-disclosed service component could exist within a SLEE to perform functions desired by Cox without some reference to this service component (other than the Applicants disclosure) constitutes an impermissible use of hindsight.

As an aside, the Applicants understand the apparent confusion by the Examiner in how Cox is intended to work (referring to components that the Examiner implies MUST be included in Cox for Cox to function in the manner detailed by Cox's description). The Applicants, after examining Cox share this confusion. Cox appears to state a number of aspirational goals, which are not enabled by specific teachings provided by Cox. These goals could likely not be achieved by a skilled artisan without inventive acts not within the scope of known art.

It is the job of neither the Applicants nor the Examiner, however, to attempt to invent ways for Cox to operate to overcome perceived shortcomings with Cox's teachings. It is enough that Cox does not disclose enabling the event processing by using an administrative service component within a SLEE, which is a novel aspect of the Applicants invention not known by one of ordinary skill in the art at the time of the invention. Attempts to infer that such teachings were contemplated (but unstated) by Cox based upon the fact that the Applicants' teachings could be used to enable aspects of Cox, amounts to an impermissible use of hindsight based upon the Applicants' own teachings.

To emphasize this point further, the Applicants will now contextually detail the cited passages from Cox that the Examiner used to imply teachings of an administrative service component to show that no such teachings were contemplated by Cox. Column 3 lines 18-20 describe that the service creation environment (a software development

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environment) can be used to create SLEE components. Column 3, lines 52-63 describe that a user can use the SCE and that created components can be deployed.

Column 4, lines 26-34 detail that services can be provided "real-time", which in the context of the passage actually means that a user can create a component (via the SCE) that is automatically deployed into the telecom environment, and then made usable by the user. That is, a design "on the fly" methodology is contemplated with a subsequent deployment step. This passage, however, has nothing to do with run-time administering a SLEE using a novel administrative SLEE service component.

In fact no other passage of Cox teaches or suggests performing administrative functions remotely. The Examiner asserted that administrative events are suggested by Cox, citing column 15, lines 52-57 in support of this assertion. The cited passage reads:

"What part of the world a user is in is maintained in an atlas, where world means whatever is perceived by the administrator of the virtual network. Users have some of all services available to them; the services a user has is maintained in a user profile. As provider of virtual networks, a carrier or network operator will create, enable, modify, disable, and delete them."

This passage appears to detail that a user configurable profile can be established for a virtual network and administered by a provider of the virtual network. This virtual network profile including a user "world" is dissimilar to remotely administering SLEE components. The virtual network associated with the user profile does not even include a SLEE to administer.

The extrapolation from the cited section to imply that Cox suggests remotely administering SLEE components in any fashion is too speculative (and unsupported) to be used as a basis of a 35 U.S.C. § 103(a) rejection. Even if such a speculation were permissible, a further leap that administration (not disclosed) of the SLEE occurs via an

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administrative service component of the SLEE (again novel and not disclosed) would be necessary for the 35 U.S.C. § 103(a) rejection to be proper.

Neither Bladow nor Deo cure the deficiencies of Cox. Bladow is cited for the generic teaching related to the use of a hypermedia document, which Cox admittedly does not teach. Bladow details a GUI that maintains session management information. Bladow provides no teachings regarding remote administration in a SLEE or any other architecture. Bladow does not contemplate an administrative service component within a SLEE that interfaces with a remote administrative terminal.

Further, since Bladow has nothing to do with performing administrative functions and since Cox does not provide teachings regarding session information, no motivation exists within the teachings of Cox and Bladow to combine the teachings in the manner suggested by the Examiner (other than motivations disclosed within the Applicants' application, which cannot properly be used as a motivation to combine Cox and Bladow).

Turning to Deo, Deo is cited for teaching the encapsulating and posting of event information in a SLEE. Deo teaches a novel method of performing services in response to service requests within an intelligent network. Deo does not contemplate an administrative service component within a SLEE nor does Deo contemplate remotely administering a SLEE from a remote terminal using a Web-based interface.

In light of the above, neither Cox, Bladow, Deo, or combinations thereof teach or suggest an administrative service component disposed within a SLEE. Moreover, neither Cox, Bladow, Deo, nor combinations thereof contemplate issuing administrative commands from a Web-based interface that results in a registered SLEE component performing an administrative action in response to the remotely received administrative input. The cited art references don't even contemplate real-time administration of SLEE components in any fashion, let alone in the manner claimed by the Applicants.



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Since each limitation of the applications invention claimed in claims 1 and 7 is not taught or suggested by Cox, Bladow, Deo, or combinations thereof, the Applicants invention is not obvious in light of these references. Further, claims 2-6 depend upon claim 1 and claims 8-12 depend on claim 7, hence each dependent claim of present invention include limitations not taught or suggested by Cox, Bladow, Deo, or combinations thereof. Accordingly, the 35 U.S.C. § 103(a) rejections to claims 1-12 should be withdrawn, which action is respectfully requested.

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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